THE TOHOKU JOURNAL OF EXPERIMENTAL MEDICINE

Volume 165

September — December 1991

EDITORIAL BOARD

N. HAYASHI (Sendai)
Editor-in-Chief

K. ABE (Sendai)
S. FUJIMURA (Sendai)
K. HARUMI (Tokyo)
M. HOMMA (Kobe)
M. IMAI (Tokyo)
T. KISHIMOTO (Osaka)
K. KOGURE (Sendai)
K. NARISAWA (Sendai)
T. OGIHARA (Osaka)
H. SATOH (Sendai)
T. TABIRA (Tokyo)
T. TACHIBANA (Sendai)
H. TAGAMI (Sendai)
F. TAKAKU (Tokyo)
T. TAKISHIMA (Sendai)
T. TOYOTA (Sendai)
J. UCHINO (Sapporo)
Y. WADA (Nagoya)
H. WAKASA (Fukushima)
H. WATANABE (Kyoto)
T. YAMAMOTO (Fukushima)

PUBLISHED BY

TOHOKU UNIVERSITY MEDICAL PRESS

SENDAI, JAPAN

CONTENTS

Vol. 165, No. 1, September 1991

Local image filing system in neurosurgery: Validity of selective storage of radiographic images. *K. Kikuchi, M. Kowada, J. Sasanuma, H. Ogayama and K. Watanabe* 1

Nitrendipine facilitates recovery of cerebral blood flow, EEG and metabolites following cerebral ischemia in anesthetized rabbits. *K. Aihara and J. Inui* 13

Immunohistochemical localization of carcinoembryonic antigen (CEA) in squamous cell carcinoma of the uterine cervix: Prognostic significance of localization pattern of CEA. *T. Toki and A. Yajima* 25

Improvement of postoperative hypocalcemia by repeated allotransplantation of parathyroid tissue without anti-rejection therapy. *T. Kunori, T. Tsuchiya, J. Itoh, S. Watabe, M. Arai, T. Satomi, K. Takakura and H. Yamaguchi* 33

Islet amyloid polypeptide has no effect on amylase release from rat pancreatic acini stimulated by CCK-8, secretin, carbachol and VIP. *Y. Kikuchi, M. Koizumi, T. Shimosegawa, J. Kashimura, S. Suzuki and T. Toyota* 41

Pharmacological effects of adenosine on canine penile erection. *Y. Takahashi, N. Ishii, T. F. Lue and E.A. Tanagho* 49

Short Reports

Effects of ethyl 4-chloro-2-methylphenoxyacetate on hepatic peroxisomal enzymes in rats. *N. Inomata, H. Yoshida, Y. Aoki, M. Tsunoda and M. Yamamoto* 59

Potentiation of acetaldehyde-induced vasoconstrictions by cocaine in isolated and perfused arteries. *S. Chiba and M. Tsukada* 63

Vol. 165, No. 2, October 1991

Bilirubin conjugation and biliary bilirubin excretion after intravenous bilirubin injection in dogs. *R. Usui, H. Ise, O. Kitayama, A. Moriyasu, Y. Abe, S. Satoh, H. Inoue, H. Hayasaka, Y. Hirama, H. Honda, N. Suzuki and S. Matsuno* 67

Maternal and fetal atrial natriuretic peptide levels, maternal plasma renin activity, angiotensin II, prostacyclin and thromboxane A_2 levels in normal and preeclamptic pregnancies. *N. Furuhashi, M. Tsujiei, H. Kimura, A. Yajima, H. Nagae and C. Kimura* 79

Class II (HLA-DR, HLA-DP, and HLA-DQ) antigens on colonic epithelia in ulcerative colitis: A comparison between uneventful and intractable cases. *Y. Horie, M. Chiba, M. Iizuka and O. Masamune* 87

Importance of Ca^{2+}, K^+ and glucose in the medium for sperm penetration through the human zona pellucida. *K. Hoshi, S. Tsukikawa and A. Sato* 99

Anti-muscarinic effect of alinidine on acetylcholine-induced vasodilation in isolated and perfused dog coronary arteries. *T. Nakane, Y. Furukawa and S. Chiba* 105

Effect of vasopressin on cardiovascular and renal functions and ANP release under plasma volume expansion. *M. Ohta, T. Kimura, K. Ota, M. Shoji, M. Inoue, K. Sato, T. Yamamoto and K. Yoshinaga* 115

Analysis of point mutations at codon 12 of K-*ras* in human endometrial carcinoma and cervical adenocarcinoma by dot blot hybridization and polymerase chain reaction. *S. Sato, K. Ito, N. Ozawa, A. Yajima and H. Sasano* 131

Expression of c-*myc*, epidermal growth factor receptor and c-*erb*B-2 in human endometrial carcinoma and cervical adenocarcinoma. *S. Sato, K. Ito, N. Ozawa, A. Yajima and H. Sasano* 137

The development of sleep and wakefulness cycle in early infancy and its relationship to feeding habit. *M. Matsuoka, M. Segawa and M. Higurashi* 147

Immunohistochemical localization of mineralocorticoid receptor in human gut. *K. Fukushima, H. Sasano, H. Nagura, I. Sasaki, S. Matsuno and Z.S. Krozowski* 155

Vol. 165, No. 3, November 1991

Effects of proteinase inhibitors on polymorphonuclear neutrophil polarization. *K. Aoshiba, A. Nagai and T. Takizawa* 165

Effects of MCPA and other phenoxyacid compounds on hepatic xenobiotic metabolism in rats. *N. Inomata, H. Yoshida, Y. Aoki, M. Tsunoda and M. Yamamoto* 171

Simultaneous measurements of cytosolic free calcium level and prostaglandin synthesis reveal a correlation between them in perfused monolayer of cultured rat vascular smooth muscle cells: Effects of bradykinin and angiotensin II. *K. Takeuchi, K. Abe, K. Maeyama, M. Sato, M. Yasujima, T. Watanabe and K. Yoshinaga* 183

Efficacy of patient-controlled analgesia for management of pain after abdominal operations. *K. Ouchi, K. Takeda and S. Matsuno* 193

No adverse effect of non-steroidal anti-inflammatory drugs, sulindac and diclofenac sodium, on blood pressure control with a calcium antagonist, nifedipine, in elderly hypertensive patients. *K. Takeuchi, K. Abe, M. Yasujima, M. Sato, M. Tanno, K. Sato and K. Yoshinaga* 201

The structure-function relationship of GLP-1 related peptides in the endocrine function of the canine pancreas. *A. Ohneda, K. Ohneda, M. Ohneda, F. Koizumi, S. Ohashi, K. Kawai and S. Suzuki* 209

O^6-Alkylguanine-DNA alkyltransferase activity in human brain tumors. *K. Mineura, I. Izumi, K. Watanabe and M. Kowada* 223

Hyperinsulinemia and blood pressure in non-obese middle-aged subjects with normal glucose tolerance. *T. Baba, T. Kodama, T. Tomiyama, N. Fujita and K. Takebe* 229

Short Reports

Nuclear DNA analysis of the periampullary carcinoma using cytologic bile specimens. *K. Kakizaki and H. Yamauchi* 237

Potent vasoconstriction by tyramine but no significant constriction by nicotine in isolated dog ear arteries. *S. Chiba and M. Tsukada* 239

Effect of clenbuterol on contractile response in periurethral striated muscle of rabbits. *T. Kishimoto, T. Morita, Y. Okamiya, K. Hoshina and T. Takeshita* 243

Vol. 165, No. 4, December 1991

Relationship between serum selenium concentration and atherogenic index in Japanese adults. *Y. Deguchi and A. Ogata* 247

Substrain comparison of genetically hypertensive rats using DNA fingerprinting, and genetic analysis of blood pressure in the inbred rats. *T. Katsuya, J. Higaki, T. Miki, J. Nakura, H. Ikegami, R. Morishita, M. Nagano, K. Higashimori, F. Nakamura, H. Mikami and T. Ogihara* 253

Effects of a benzodiazepine antagonist, Ro 15-1788, on hippocampal field potentials in freely moving rats. *H. Suzuki* 261

Effect of pericardium on regional myocardial systolic function in acute ischemia. *K. Shirato, K. Ishikawa, M. Kanazawa, T. Nakajima, K. Munakata, M. Sakuma, T. Haneda and T. Takishima* 271

Improvements in qualitative characteristics of cryopreserved human spermatozoa following recovery via the SpermPrep™II filtration method. *P. M. Zavos, N. Sofikitis, T. Toda and I. Miyagawa* 283

Effect of calcium on rat gastric carcinogenesis induced by *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine. *S. Komatsu, T. Masuda and S. Hisamichi* 291

A difference in prostaglandin-produting ability between cancer cells metastasized into liver and kidney. *I. Nakazawa, M. Iwaizumi and K. Ohuchi* 299

The in vitro effects of glycyrrhizin and the derivatives of glycyrrhetinic acid on the activity of cAMP-dependent protein kinase and phosphorylation of cellular polypeptide by the kinase from Ehrlich ascites tumor cells. *F. Shamsa, N. Nagata, M. Oh-Ishi and K. Ohtsuki* 305